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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/484,749	01/18/2000	Qinyun Peng	FDN-2604	1054

7590 12/16/2002

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1361 Alps Road
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EXAMINER

SINGH, ARTI R

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 12/16/2002

9

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-9

Office Action Summary	Application No.		Applicant(s)	
	09/484,749		PENG ET AL.	
	Examiner		Art Unit	
	Ms. Arti R. Singh		1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/04/02 has been entered.
2. The Examiner has carefully considered Applicant's amendments and accompanying remarks filed with the RCE. Applicant's amendment's to claims 1 and 4, and cancellation of claim 3 have all been entered. The previously made rejection under 35 USC § 102 is being withdrawn and reapplied as a 103 rejection. New rejections follow.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1, 2 and 4-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. In claim 1 it is not clear to the Examiner as to where the adhesion modifier is being applied. The claim states that it is non reactive to the surface in line 5, to the surface of what? The glass mat or the resin binder? For the purposes of examination the Examiner is equating the modifier to be applied to the surface of the binder, as it appears that the glass mat is imbedded in the resin and then the modifier is applied to it. Additionally, when using the term "applied", the Examiner must construe the broadest interpretation of the word, meaning that, "applied" could be impregnated, coated or chemically reacted, thus making it unclear as to how or where the modifier is nonreactive. Further, how would one skilled in the

Art Unit: 1771

art be able to tell the difference as to how the modifier was applied in the final product?

Please clarify as to what is exactly meant by the terms "applied" and "non-reactive" and, to which do they apply, that is the glass mat or the binders or both? The Examiner requests clarity to both of these limitations, as per Applicant's arguments they appear to be critical to the invention, but are not clearly indicated in the claims.

6. Claim 1 recites the limitation "asphalt coated hand sheets and asphalt shingles" in line 6 and 7 of the claim. There is insufficient antecedent basis for this limitation in the claim. Applicant starts off the claim stating that the glass fiber mats are used in roofing composite and then states the hand sheets and the shingles which the Examiner believes are forms of roofing composite, however it still lacks antecedent basis.

7. Claims 2 and 4-8 are all rejected as being dependant on a rejected base claim.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 2 and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mirous (USP 5,518,586), further in view of Marzocchi (USPN 3,865,682). Mirous discloses high tear strength glass mats comprising urea-formaldehyde resin binders applied to a fibrous glass mat and useful in making roofing shingles (column 2, lines 64-65). The resin is further modified by additives and cross-linking agents (abstract and column 2, lines 6-24). Presently the Examiner is equating the surface to which the adhesion modifier is applied to as the resin binder surface. The fibers generally have a length of 0.25 to 3 inches (6.4-7 mm) and a

Art Unit: 1771

diameter of 3 to 20 microns (column 3, lines 55-63). In column 5, lines 49-54 the instant patent discloses that the finished glass mat composite generally contains between 60% to 90% by weight glass fibers and between 10% to 40% of resin binder. Mirous does not teach the use of the specific polysiloxane as it's additive.

Marzocchi disclose the use of silanes, including derivatives of those sought by Applicant, which is the polysiloxane being a polyalkyl siloxane, a polyaryl siloxane, a polyalkylaryl siloxane or a polyether siloxane or a derivative thereof. Hence it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have added the specific polysiloxane as the adhesion modifier to the resin of Mirous. Motivation to do so would be to improve the moisture resistance of the glass fiber mat useful as a roofing shingle, as is disclosed by Mirous.

With regard the Applicant's amendment of claim 1 to include the ASTM D-3462, July 10 1997Ed., test standard, to this the Examiner believes that if structurally and chemically the same materials are used, then presumably one would end up with the same properties of tear strength that Applicant seeks.

Response to Arguments

10. Applicant's arguments with respect to claims 1, 2 and 4-8 have been considered but are moot in view of the new ground(s) of rejection.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ms. Arti R. Singh whose telephone number is 703-305-0291. The examiner can normally be reached on M-F 7:00am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the

Art Unit: 1771

organization where this application or proceeding is assigned are 703-873-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



ars
December 10, 2002

Ms. Arti R. Singh
Patent Examiner
Art Unit 1771